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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/909,025	07/19/2001	Neil F. Schutzman	EMC-011PUS	9106

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DALY, CROWLEY & MOFFORD, LLP
SUITE 101
275 TURNPIKE STREET
CANTON, MA 02021-2310

EXAMINER

CHEN, CHONGSHAN

ART UNIT	PAPER NUMBER
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2172

DATE MAILED: 06/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/909,025

Applicant(s)

SCHUTZMAN ET AL. 

Examiner

Chongshan Chen

Art Unit

2172

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 47-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 47-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communication: RCE filed on 7 May 2004. This action is non-final. Claims 47-63 are pending.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 47 is rejected under 35 U.S.C. 103(a) as being unpatentable over Allen (5,491,810) in view of Ashcraft et al. ("Ashcraft", 5,247,660).

As per claim 47, Allen teaches a method of creating a data storage pool, comprising:
providing information for a plurality of storage resources in response to a user query
(Allen, col. 3, lines 13-52);

assigning at least one storage property to selected ones of the plurality of storage resources in response to user instructions to define the data storage pool (Allen, col. 3, lines 13-52);

allocating selected ones of the identified storage resources for the requested store operation (Allen, col. 3, lines 13-52).

Allen does not explicitly disclose receiving a logical expression to identify respective ones of the storage resources that are available for a requested store operation based upon the storage properties assigned to the selected ones of the storage resources. Ashcraft teaches

Art Unit: 2172

searching for and allocating storage based on the characteristics of the storage media, the characteristics of the files, the relationships between files, and future storage requirements (Ashcraft, col. 17, lines 13-17). It is well known in the art that searching involves creating a logical search expression that binds the search conditions together using logical operators like AND, OR, etc. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Ashcraft with Allen and receiving a logical search expression in order to search desired storage.

As per claim 48, Allen and Ashcraft teach all the claimed subject matters as discussed in claim 47, except for explicitly disclosing the logical expression includes at least one logical operator and at least two storage properties. However, Ashcraft teaches searching and allocating storage according to storage characteristics and requirements (Ashcraft, col. 17, lines 13-17). Please notice the characteristics and requirements are plural, therefore, it is obvious that the characteristics and requirements include at least two storage properties. Furthermore, it is well known in the art that searching involves creating a logical search expression that binds the search conditions together using logical operators like AND, OR, etc.

As per claim 49, Allen and Ashcraft teach all the claimed subject matters as discussed in claim 48, and further teach the logical expression includes an amount of storage needed for the requested store operation (Ashcraft, Fig. 4).

As per claim 50, Allen and Ashcraft teach all the claimed subject matters as discussed in claim 47, and further teach searching and allocating storage according to received storage characteristics and requirements (Ashcraft, col. 17, lines 13-17), which obviously includes receiving a new property as part of the logical expression.

As per claim 51, Allen and Ashcraft teach all the claimed subject matters as discussed in claim 47, and further teach assigning a particular one of the at least one storage properties to a particular type of storage resource (Allen, col. 3, lines 13-52).

As per claim 52, Allen and Ashcraft teach all the claimed subject matters as discussed in claim 47, and further teach the plurality of storage resources includes logical volumes (Ashcraft, col. 3, lines 23-67).

As per claim 53, Allen and Ashcraft teach all the claimed subject matters as discussed in claim 47, and further teach identify the characteristics of the storage (Allen, col. 3, lines 13-52), which inherently includes identify the storage as hand-off storage.

As per claim 54, Allen and Ashcraft teach all the claimed subject matters as discussed in claim 47, except for explicitly disclosing the user query is generated by a storage administrator. However, the storage administrator controls the storage allocation. Therefore, it is obvious the storage administrator generate the user query in order to allow the user to search for desired storage.

As per claim 55, Allen and Ashcraft teach all the claimed subject matters as discussed in claim 47, except for explicitly disclosing the logical expression is generated by a database administrator. However, the database administrator controls the building of logical search expression. Therefore, it is obvious the database administrator generates the logical expression in order to allow the user to search for desired storage.

Claims 56-59 are rejected on grounds corresponding to the reasons given above for claims 47-49 and 51.

Art Unit: 2172

Claims 60-63 are rejected on grounds corresponding to the reasons given above for claims 47-49 and 51.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chongshan Chen whose telephone number is 703-305-8319. The examiner can normally be reached on Monday - Friday (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E Breene can be reached on (703)305-9790. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 28, 2004


SHAHID ALAM
PRIMARY EXAMINER